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ARIZONA STATE UNIVERSITY ■ COLLEGE OF BUSINESS
BUREAU OF BUSINESS AND ECONOMIC RESEARCH

Economic Forecasts: Part II

Leading Index Used To Forecast Any 12-Month Period

The accuracy of economic forecasts and an alternative method of forecasting the Gross National Product (GNP) were examined in the August *Arizona Business*. This article elaborates on those topics.

FORECAST ACCURACY

The most common economic forecast presents calendar-year, annual-average data. While valuable, an annual average may disguise the course of economic events throughout the year because it may have been derived from any one of several assumptions. For example, a forecast of slow growth throughout the year could result in the same annual-average percent change in GNP as a prediction of moderate growth followed by a recession. Yet, the distinction between these forecasts would be important to the planning of business, government, and individuals.

Unfortunately, the accuracy of forecasting quarterly economic activity leaves much to be desired. Unless the forecaster has a persistent bias toward optimism or pessimism, large quarterly forecast errors tend to cancel each other out. The result can be a relatively accurate annual forecast despite imprecise predictions on the course of events throughout the year.

AN ALTERNATIVE

The method of forecasting annual change in the GNP from the national

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GSP Growth Remains Inconsistent

The Arizona Gross State Product continued to expand at a relatively slow rate during second quarter 1985. Since the end of Arizona's rapid economic expansion during third quarter 1984, real adjusted GSP has grown inconsistently. The average annual rate of approximately 5.5 percent is also the long-term average. Adjusted GSP slowed during the second quarter to a 5.1 percent annualized rate from a revised first quarter rate of 8.4 percent (see Table 1).

Without adjustment for the wide fluctuations in the agriculture and mining sectors, real GSP has followed a more erratic course. Because of generally poor conditions in both mining and agriculture, growth in the unadjusted GSP has been slightly slower.

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"Forecasts," from page 1

Index of Leading Economic Indicators was discussed in the August issue only in the context of making a calendar-year forecast. However, this technique can be applied to forecast the annual average growth of any 12-month period. For example, a fiscal year (July to June) GNP forecast can be derived by calculating the percent change in the June leading index from the June index of the prior year. The April or May leading indexes could be used if an earlier forecast is desired.

Forecast Error/Adjustments

The average absolute error of 51 forecasts made quarterly since the end of 1971 was 1.0 percent; the median error, independent of sign, was just 0.7 percent. However, these errors can be further reduced because the largest are partially predictable; this forecasting technique is not as accurate at certain identifiable stages of the economic cycle.

GNP growth is usually underestimated by this method when the economy is beginning to recover from a recession, a result of large declines in the leading index that typically occur near the end of a recession. Even after the leading index has clearly signaled a recovery, these large declines remain a part of the 12-month percent change. The solution is to bump up the forecast by 1 to 1.5 percentage points when a recovery is indicated by the decision rule discussed on page 4. The upward modification should be made for three successive quarters, beginning with the quarter in which the trough in the leading index occurs. Because of the lag in recognizing the trough, some of this adjustment must be done retroactively.

A similar adjustment — but downward — must be made when the economy enters a recession. Initial declines in the leading index, indicating an upcoming recession, are usually small in magnitude. Thus, while the method predicts slower GNP growth, it underestimates the magnitude of the deceleration, again by 1 to 1.5 percentage points for three successive quarters, beginning with the quarter in which the leading index peaks.

Revisions

Users of this technique to forecast GNP also need to be aware of the numerous revisions to each month's leading index; the initial change may be substantial. The effect on the GNP forecast is relatively minor, however, because a revision to one month's index does not greatly affect the 12-month percent change. Further, the revision to the GNP forecast is of lesser magnitude than the correction to the leading index's 12-month percent change. The median absolute difference between the preliminary and final forecasts of GNP was just 0.3 percentage points for quarterly forecasts made since 1978. In only 2 of 27 quarters did the difference exceed one percentage point.

Recent Forecasts

The accuracy of forecasts made since the end of the last recession is detailed in Table 1. The large error in the forecast made from the September 1982 leading index could have been corrected since the leading index had already signaled the end of the recession. No subsequent error has exceeded 0.5 percentage points, indicating that the method accurately predicted both the rapid growth during 1983-84 and the ensuing slowdown.

Forecasts made from the December 1984 and March 1985 leading indexes appear to be too low, however — by approximately one percentage point — according to partial data available for the respective 12-month periods being forecast. The stagnation in the leading index throughout most of 1984 and early 1985 seems to have overexaggerated the slowdown of economic growth.

— **Tom R. Rex**
Research Manager

TABLE 1
GNP FORECAST FROM THE INDEX OF LEADING ECONOMIC INDICATORS

Month/Year of Leading Index[1]	*Actual GNP*[2]	Using Preliminary Value of Leading Index		Using Latest Value of Leading Index	
		Forecast	*Error*	*Forecast*	*Error*
September 1982	1.7%	0.9%	−0.8	0.2%	−1.5
December 1982	3.7	3.9	0.2	3.5	−0.2
March 1983	5.6	5.7	0.1	5.8	0.2
June 1983	6.7	6.3	−0.4	6.5	−0.2
September 1983	7.0	6.5	−0.5	6.5	−0.5
December 1983	6.8	6.4	−0.4	6.5	−0.3
March 1984	5.6	5.6	0.0	5.8	0.2
June 1984	4.2	4.7	0.5	4.6	0.4
September 1984	3.3	3.2	−0.1	3.5	0.2
December 1984	NA	1.8	NA	1.4	NA
March 1985	NA	0.9	NA	1.2	NA
June 1985	NA	1.9	NA	2.5	NA
September 1985	NA	3.1	NA	3.1	NA

NA: Not available — includes period not yet concluded.

[1]Preliminary value was available on the last day of the following month; e.g., one month into the 12-month period being forecast.

[2]Average percent change of the four quarters, beginning with the month subsequent to the month of the leading index.

Source: Bureau of Business and Economic Research, College of Business, Arizona State University. The GNP and national leading index are from the U.S. Department of Commerce.

"GSP," from page 1

REVISIONS

Arizona GSP estimates are frequently revised, sometimes by substantial amounts. As illustrated in Figure 1, the magnitude of the first revision to the GSP was significant in four of the last six quarters. The latest estimate varies widely from the initially revised estimate in three of five quarters.

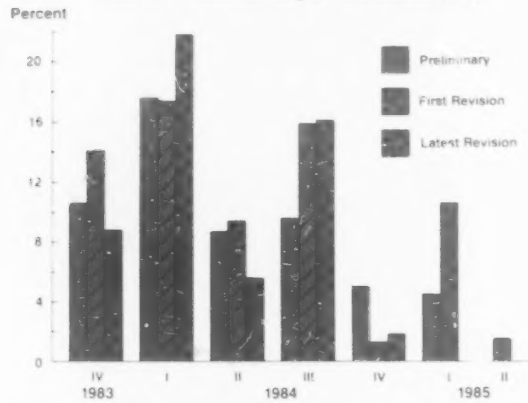
While various data series are included in the calculation of GSP, personal income carries the greatest weight and is most frequently and substantially revised. First quarter 1985 estimates of personal income, compiled by the U.S. Department of Commerce's Bureau of Economic Analysis, are shown in Figure II. (These percent changes are *not* annualized.) Although the preliminary estimates were not available until the end of July — four months after the end of the quarter — estimates for most sectors still were substantially revised three months later.

The largest revisions typically are made to the agriculture and mining estimates — part of the reason for omitting these sectors from the adjusted GSP. Figures for the services and trade sectors usually are reliable.

OUTLOOK

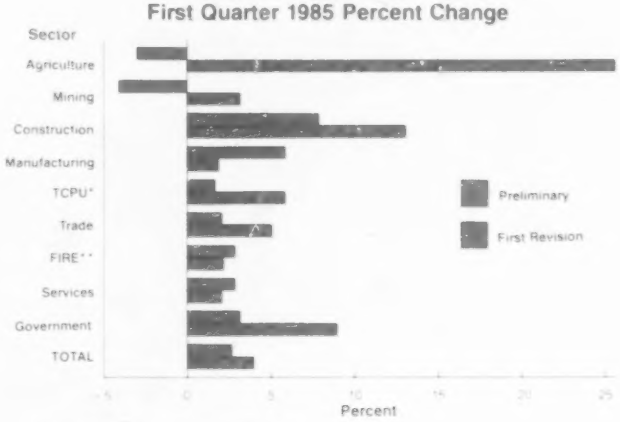
National economic growth improved during third quarter 1985, with GNP rising 3.3 percent, compared to gains of 0.3 percent and 2.0 percent in the

FIGURE I
ARIZONA GROSS STATE PRODUCT
Real Percent Change, at Annual Rate



Source: Bureau of Business and Economic Research, College of Business, Arizona State University

FIGURE II
ARIZONA PERSONAL INCOME
First Quarter 1985 Percent Change



*TCPU—Transportation, Communications, and Public Utilities
**FIRE—Finance, Insurance, and Real Estate
Source: U.S. Department of Commerce, Bureau of Economic Analysis

TABLE 1
QUARTERLY ECONOMIC GROWTH

	Arizona Gross State Product[r]				Gross National Product
Quarter	*Billions of Current Dollars, Annualized*	*Billions of 1972 Dollars, Annualized*	*Annualized Percent Change (1972 Dollars)*	*Annualized Percent Change (Adjusted GSP)**	*Annualized Percent Change (1972 Dollars)*
First 1983	$33.756	$16.635	14.7%	18.6%	3.3%
Second 1983	35.558	17.472	20.1	22.6	9.4
Third 1983	37.183	18.121	14.9	13.3	6.8
Fourth 1983	38.159	18.522	8.8	5.3	5.9
First 1984	39.832	19.531	21.8	23.7	10.1
Second 1984	40.719	19.804	5.6	11.7	7.1
Third 1984	42.217	20.599	16.1	12.2	1.6
Fourth 1984	42.669	20.693	1.8	2.8	4.3
First 1985	44.615	21.242	10.6	8.4	0.3
Second 1985	45.139	21.324	1.5	5.1	2.0

*The adjusted GSP is the annualized GSP in billions of 1972 dollars, minus the contributions of the agriculture and mining industries.

[r]All GSP data have been revised due to revisions to personal income estimates by the U.S. Department of Commerce.

Source: Bureau of Business and Economic Research, College of Business, Arizona State University; in cosponsorship with the ASU College of Business Dean's Council of 100.

two prior quarters. In conjunction with somewhat stronger gains in the national leading index, this GNP increase suggests that the slowest economic growth may have occurred during the first half of 1985. However, the expansion of GNP is likely to average only 3 percent, the long-term average, from fourth quarter 1985 through third quarter 1986. Because an erratic pattern probably will continue, periods of below average growth will recur.

A similar situation should prevail in Arizona. GSP growth should again exceed its long-term average during the second half of 1985 and into early 1986. However, the Arizona leading index suggests that the improvement will be modest and inconsistent.

— **Tom R. Rex**
Research Manager

Year-end Acknowledgments

Monthly publication of a data-based periodical such as *Arizona Business* reflects numerous and diverse behind-the-scenes efforts. As 1985 draws to a close, we would like to acknowledge the contributions of those individuals whose expertise, hard work and dedication have brought our readers current economic/real estate data and analysis over the past year.

Sandy Palais and Peter Luan, College of Business computer specialists, assist with many Bureau of Business and Economic Research projects. For example, Palais programmed the home appreciation study and the *Arizona Business* mailing list; she also prepares the computer-generated graphics that appear in each issue. Luan's programming efforts include the building permits and home sales studies.

Graduate research assistants collect and manipulate the data for several Bureau projects. Paul Umbriano assists with the Arizona leading index, the Gross State Product, and economic forecasting. Tom O'Connor is responsible for compiling the building permits. Barbara Connell and Carol Marlowe collect the many prices needed to calculate the Phoenix CPI.

The Bureau's administrative, secretarial and clerical staff keep the recently computerized mailing list updated; word process article manuscripts; proof galleys; and handle the bookkeeping. We extend special thanks to Ann Beard, Sylvia Jackson, Michal Craite and Anne Shepard.

The new *Arizona Business* cover design was creatively rendered by Kas Winters, president of Kasgraphics. On a monthly basis, typesetting, design and paste-up are performed by Watermark Graphics. Indian Graphics prints *Arizona Business*.

Thank you one and all!

—**Lee R. McPheters**
Bureau Director
—**Mary Wery Garcia**
Editor

Arizona Leading Index Slips in September

The Arizona Index of Leading Economic Indicators dropped sharply in September, following three consecutive large monthly gains (see Figure I). September's 0.4 percent decline pulled the index down to 106.0 from a revised 106.4 in August (1977 = 100).

Only 40 percent of the index components rose during September, led by a moderate gain in the national money supply (M2). Small increases were posted for residential building permits, average hours worked in the manufacturing sector, and sensitive materials prices (see Table 1).

Each of the five components derived from a survey of Arizona purchasing managers declined in September; the total decrease was the largest since April 1980, more than offsetting the substantial August increase. Two of these components, employment and delivery time, reached their lowest levels since the end of the 1982 recession.

The number of unemployment insurance claims rose in September (a negative leading indicator), reaching the highest level in two years. Arizona's unemployment rate has risen throughout 1985.

DECISION RULES

The primary use of a leading index is to signal turning points in the economy. Selection of an accurate decision rule, one used to interpret the leading index for this purpose, is of utmost importance. Much of the criticism levied against the national leading index is really opposed to the decision rule commonly applied: three consecutive monthly declines predict a recession. Such a simplistic rule is highly inaccurate.

A reasonably simple, yet precise, decision rule to apply to both the Arizona and national leading indexes was discussed in the August 1985 *Arizona Business*. (Basically, a turning point can be predicted if the index changes direction by at least 1.5 percent during a two-month-or-longer period.) An alternative decision rule was recently proposed by economists at the Federal Reserve Bank of New York. Their method, complex to calculate, is limited to predicting recessions. However, it has the advantage of producing a probabilistic assessment of the likelihood of a recession.

The new decision rule was applied to the Arizona index; its accuracy since 1970 has been virtually identical to that of the decision rule proposed by the Bureau of Business and Economic Research. The probability of a recession is typically less than 1 percent and rarely exceeds 10 percent. A probability of 90 percent has reliably signaled a recession, with a lead time of several months.

Since early 1984, when the Arizona index began to display an erratic pattern of little growth, the probability of a recession never reached 10 percent and frequently remained less than 1 percent. However, the large drop in September's index caused the probability of a recession beginning during the next few months to increase to 12 percent — still comfortably small.

OUTLOOK

The Arizona index has increased only slightly since December 1983, accurately signaling the slow economic growth that has persisted since late 1984. Most of the index's monthly changes have been slight; the number of declines has nearly matched the number of gains. Periods of larger advances in the index have resulted from isolated factors rather than from widespread, lasting improvements in its components.

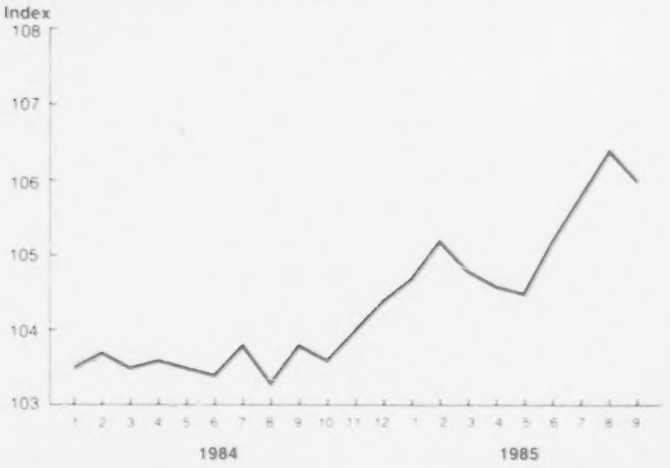
For example, the index increased moderately for four consecutive months in late 1984 and early 1985, but the acceleration was due only to large gains in the national money supply. Strong summer advances were also tied to specific factors: June's step-up was due to a substantial rise in the national money supply; July's boost came from a one-month response to lower interest rates by the housing sector; August's large rise, primarily caused by indicators derived from a survey of purchasing managers, was almost completely reversed in September.

Thus, the Arizona leading index indicates that slow economic growth will persist into 1986. Certain sectors of the economy will continue to experience temporary surges in activity, but a lasting, general recovery should not be expected during the next few months. Yet, the chance of a recession remains equally remote.

Nationally, the leading index barely rose in September, indicating that a lasting, widespread improvement in the national economy is also unlikely.

— **Tom R. Rex**
Research Manager

FIGURE I
ARIZONA INDEX OF LEADING ECONOMIC INDICATORS



Source: Bureau of Business and Economic Research, College of Business, Arizona State University

TABLE 1
NET CONTRIBUTION OF INDIVIDUAL COMPONENTS TO THE ARIZONA INDEX OF LEADING ECONOMIC INDICATORS

	Net Contribution*			
	June	*July*	*Aug.*	*Sept.*
Delivery Time*	.05	−.06	.10	−.11
Inventory Levels*	.10	.03	.06	−.09
New Orders*	.04	−.04	.13	−.09
Production*	−.01	.01	.07	−.03
Employment*	.02	−.07	.12	−.15
Residential Building Permits	−.08	.59	−.37	.03
Unemployment Insurance Claims	.15	−.14	.16	−.21
Average Workweek, Manufacturing	−.04	.06	.02	.07
Money Supply	.42	.24	.35	.18
Change in Sensitive Materials Prices	.02	−.06	−.04	.01
OVERALL INDEX	.67	.56	.59	−.39

Net contributions for prior months have been revised.

*The net contribution of each component is calculated by multiplying the monthly percent change in its index by its relative importance.

*Based on indicators from the purchasing management associations of Arizona and southern Arizona.

Source: Bureau of Business and Economic Research, College of Business, Arizona State University.

Housing Affordability Index at Highest Level

Resale home affordability during third quarter 1985 reached the highest level since the Metropolitan Phoenix Housing Affordability Indexes began in 1981. The affordability of new homes nearly reached the early 1983 peak.

Housing became more affordable because of further declines in mortgage interest rates, which were at the lowest level since 1980. These declines more than offset continued modest gains in home prices.

A household with the median income of $2,580 per month earned 90 percent of the income needed to qualify, with a 15 percent downpayment, for a fixed-rate, conventional, 30-year mortgage on the median-priced ($75,000) resale home (see Table 1). This third quarter 1985 affordability index of 90 marked a substantial improvement over the 1981 low of 55, and it exceeded the second quarter 1985 index of 87.

Due to a higher median sales price ($83,575), the third quarter affordability index for new homes (81) was lower than that for resale homes. The affordability of new homes also rose more slowly than that of resale homes in recent quarters because new home prices increased at a more

rapid rate. However, the new home index still improved from the second quarter level of 78; the low point was 49 in 1981.

Housing affordability in the Phoenix area slipped slightly lower than the national average, which was 91 for resale homes and 85 for new homes, because home prices did not rise as rapidly nationally during the third quarter.

Little change is likely in the affordability indexes during the next few months, due to stabilized mortgage rates and to the fact that prices and household incomes are rising at approximately the same rate.

— **Jacqueline Fifield**
Research Analyst

TABLE 1
HOUSING AFFORDABILITY INDEXES
Metropolitan Phoenix

Quarter	Median Sales Price	Interest Rate	Monthly Housing Payment	Median Gross Monthly Income	Affordability Index
Resale Homes					
3rd, 1985	$75,000	12.6%	$800	$2,580	90
2nd, 1985	72,500	13.4	820	2,560	87
3rd, 1984	73,000	14.8	910	2,490	76
New Homes					
3rd, 1985	$83,575	12.6%	$900	$2,580	81
2nd, 1985	81,150	13.4	920	2,560	78
3rd, 1984	79,250	14.8	990	2,490	70

Source: Bureau of Business and Economic Research and the Arizona Real Estate Institute, College of Business, Arizona State University. Interest rates are from the Federal Home Loan Bank Board *News*, and income figures are derived from the Annual Buying Survey in *Sales and Marketing Management*.

Valley Home Sales Reach Prior Peak

The number of homes sold in the Phoenix metropolitan area during the third quarter rose an additional 3 percent beyond the 37 percent gain of the second quarter (see Table 1). This increase came in response to further declines in mortgage interest rates during late May. The 15,316 sales nearly matched the 15,337 sales of second quarter 1984 — the highest level since this series began in 1981.

New home sales particularly benefited from the interest rate declines, surpassing by 19 percent the highest previous quarterly volume. In contrast, sales of existing townhouses and condominiums again declined; third quarter sales were 30 percent fewer than the peak level attained during 1981.

MEDIAN SALES PRICE AND APPRECIATION RATE

For the third consecutive quarter, the median price of all homes sold was 3.1 percent higher than in the same quarter of the prior year. However, the median price of resale townhouses and condominiums remained less than in the same quarter of the prior year, another sign of the slump in this housing segment. Since the median size of townhouses and condominiums sold during 1985 was slightly larger than in 1984, the decrease in price per square foot was even larger.

The third quarter appreciation rate for single family homes, 0.8 percent, remained in the 0.7 percent to 0.8 percent range for the 10th successive quarter.

— **Tom R. Rex**
Research Manager

TABLE 1
METROPOLITAN PHOENIX HOME SALES

	Single Family			Townhouse/Condominium			Grand
Third Quarter 1985	*Resale*	*New*	*Total*	*Resale*	*New*	*Total*	**Total**
Median sales price	$75,000	$83,575	$77,625	$61,400	$66,475	$64,000	$75,000
Percent change from:							
Second quarter 1985	3.4	3.0	3.6	−2.5	3.9	0.9	3.2
Third quarter 1984	2.7	5.5	3.5	−2.5	5.4	1.6	3.1
Number of sales	10,081	3,228	13,309	1,114	893	2,007	15,316
Percent change from:							
Second quarter 1985	1	27	6	−21	−2	−14	3
Third quarter 1984	8	35	13	−10	4	−4	11

Source: Bureau of Business and Economic Research, College of Business, Arizona State University; from data supplied by Marketron Services, Inc., Phoenix.

October Purchasing Indicators Slide Sideways

The Arizona economy registered modest growth, without showing any real vigor, in October. Conflicting signs were evident: inventories were being liquidated; delivery times lengthened; and new orders, production, employment, and purchases increased — all changes were small, however. There is almost no sign of inflationary pressures. In short, the state's economy slid sideways.

After a superlative performance in 1983 and most of 1984, economic growth has deteriorated steadily during 1985. Profits are under pressure, interest rates seem stuck at a level too high to stimulate a higher growth tempo, and the trade deficit balloons as imports continue at a record pace. Although the locomotive pretty much has lost its head of steam over the last half of the year, the Arizona economy now is nearing the end of its third year of growth. Sluggish growth likely will continue over the balance of the year and into 1986, unless a dramatic decrease in interest rates occurs; this would increase spending, reduce the value of the dollar, and stimulate exports. Even if interest rates are forced down, several months would pass before higher growth became evident.

Table 1 presents the results of the October survey of Arizona purchasing managers.

PRICES

Prices paid for major purchased items increased slightly in October, consistent with the previous five months, each of which showed only a minor upward movement. While the latter half of the year has seen a lower price-increase trend than the first half, the overall year-to-date inflation rate has been very low. This relative price stability is one of the key factors permitting the economy to expand over the past three years. While inflation likely will step up toward the end of 1985, it does not pose an immediate threat to orderly economic growth.

DELIVERY TIME

Delivery time on shipments from vendors stretched in October at the highest rate this year, following September's unchanged lead time. Delivery time stretch-outs have been small over all of 1985. The October increase shows that vendor economic activity is stepping up somewhat — a good sign.

INVENTORIES

Inventory levels of purchased materials dropped for the second consecutive month. Firms have liquidated inventory in five of the last ten months, and the level is now low enough that any sizable new order and production level increases will trigger inventory rebuilding. When Arizona business begins to restock, the economic tempo will improve.

NEW ORDERS

New orders received by Arizona firms went up in October, but the increase was much smaller than in August and September and the second-lowest this year. Order bookings do not show real strength as we enter the last quarter.

PRODUCTION

Production also rose in October, but at a lower rate than in September. The October and July increases were the smallest so far this year, a reflection of lackluster new order receipts.

EMPLOYMENT

Employment edged up at approximately the same modest rate as in September. Employment has not shown solid strength this year; however, an increase (often small) has been recorded for each of the past 10 months.

PURCHASES

Purchases of materials and supplies by Arizona firms were higher in October than in September. The increases in this indicator so far in 1985 have been well under those of 1984. Purchases will begin to increase only when order bookings get healthier.

— Harold Fearon

Dr. Fearon is chairman of the Department of Purchasing, Transportation, Operations in the ASU College of Business and is the National Association of Purchasing Management Professor.

TABLE 1
OCTOBER PURCHASING SURVEY

	Percent of Purchasing Managers Indicating Each Response (October compared to September)		
Key Indicators	*Higher*	*Same*	*Lower*
Prices paid for major commodities	15	77	8
Delivery time from vendors	24	65	11
Purchased materials inventory level	28	37	35
New orders received	37	37	26
Production	33	44	23
Employment	23	58	19
Purchases	40	37	23

Source: Purchasing Management Association of Arizona and the Purchasing Management Association of Southern Arizona.

Arizona Purchasing Survey

Now in its 24th year of monthly reporting, Dr. Harold Fearon's survey of Arizona business conditions utilizes data from a questionnaire sent to members of the purchasing management associations of Arizona and southern Arizona. It asks them to indicate the direction of activity — higher, unchanged, or lower — of seven key measures of economic activity in the month just ended. These purchasing managers deal daily with supply, demand, and price factors in the marketplace; their aggregate readings have accurately charted the state's economic course for two decades, providing timely data on turning points.

ARIZONA ECONOMIC INDICATORS

	Month or Quarter	Value	Percent Change from Previous Period	Percent Change from Year Ago	Year-to-Date Value	Year-to-Date Percent Change from Year Ago
GROSS STATE PRODUCT (In Billions of Dollars, at Annual Rate)						
Arizona - Current Dollars	2nd Qtr.	45.139	4.7	10.9	NA	NA
Arizona - 1972 Dollars	2nd Qtr.	21.324	1.5	7.7	NA	NA
CONSUMER PRICE INDEX (1977 = 100)						
Metropolitan Phoenix	3rd Qtr.	191.4	0.3	4.5	NA	NA
INDEX OF LEADING ECONOMIC INDICATORS (1977 = 100)						
Arizona	Sept.	106.0	-0.4	2.1	NA	NA
BUILDING PERMITS (Total Dollar Value in Thousands)						
Maricopa County	August	361,223	-12	3	2,890,973	6
Pima County	August	82,252	9	21	562,926	3
Balance of State	August	65,786	2	57	471,287	7
Arizona	August	509,261	-7	10	3,925,186	6
TOTAL HOUSING UNITS AUTHORIZED						
Maricopa County	August	5,249	31	6	38,273	-14
Pima County	August	1,242	61	-33	8,966	-24
Balance of State	August	1,644	33	35	12,003	29
Arizona	August	8,135	35	1	59,242	-10
HOME SALES						
Maricopa County - Number	Sept.	4,716	-1	18	41,023	-3
Maricopa County - Median Price	Sept.	75,000	-1.3	2.9	73,250	3.3
HOUSING AFFORDABILITY INDEXES						
Metropolitan Phoenix - New Homes	3rd Qtr.	81	3.8	18.4	NA	NA
Metropolitan Phoenix - Resale Homes	3rd Qtr.	90	3.4	15.7	NA	NA
ELECTRICAL POWER SALES (In Millions of Kilowatt Hours)						
Arizona	Sept.	2,970.9	-23.9	-17.8	27,682.1	6.0

NA = Not Applicable.

Source: Bureau of Business and Economic Research, College of Business, Arizona State University.

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